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II

List of the Species of Reptiles and Fishes collected by Mr. A. E. Pratt on the Upper Yang-tze-kiang and in the province Szechuen, with description of the New Species. By Albert Günther, M.A., M.D., Ph.D., F.R.S.

THE following notes contain, besides the species described in the 'Annals and Magazine of Natural History,' 1888, vol. I., and 1889, vol. IV., all those contained in the last collections brought home by Mr. Pratt.

TORTOISES

1. *Emys reevesii* (Gray). Mountains north of the Kiu-kiang.

The ornamental colours of the soft parts are distributed as follows:—They consist of yellow bands and spots, edged with black; the most conspicuous is a band running from the upper part of the eye along the upper margin of the neck; sometimes it is interrupted in some part of its course, and generally a continuation of it is visible in front of the eye. A short curved band between the eye and the tympanum, another running from the lower part of the eye to below the tympanum; an oblong spot at the posterior angle of the mandible. Tympanum and post-tympanic region with curved streaks and spots. Sides and lower part of the neck with parallel straight bands, posteriorly broken up into series of spots. In very young examples these ornamentations are less numerous.

2. *Trionyx sinensis* (Wieg.). Vicinity of Kiu-kiang.

LIZARDS

3. *Tachydromus septentrionalis* (Gthr.). Common in the mountains north of Kiu-kiang.
4. *Tachydromus wolteri* (Fisch.). Much scarcer.

5. *Lygosoma reevesii* (Gray). Mountains north of Kiu-kiang, and at Mo-si-mien Pass in the province of Sze-chuen (alt. 12,800 ft.).
6. *Lygosoma elegans* (Blgr.). One specimen from the mountains north of Kiu-kiang.
7. *Eumeces xanathi*, sp. n.

This species is of special interest inasmuch as it is most closely allied to the Californian *Eumeces skiltonianus*, from which it is barely distinguishable by a somewhat different coloration and by the postfrontals being widely separate from each other, whilst they are more or less in contact in the American form.

Snout of moderate length. Nasal small, followed by a postnasal, which forms a suture with the first two labials; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the vertical; occipitals entirely separated by the central occipital; two pairs of nuchals; seventh upper labial largest; two or three very obtuse tubercles on the anterior border of the ear, which is smaller than a dorsal scale; two azygos postmentals. Twenty-four or twenty-six scales round the body, the dorsal much broader than the lateral and ventral. Limbs overlapping when pressed against the body; the length of the hind limb is contained twice and a half to twice and two-thirds in the distance from snout to vent. A median series of transversely enlarged subcaudals. Dark olive above, with a black lateral band extending from the loreal region to the tail; the band is bordered above and below by a light streak, which again has a blackish margin. Four series of dorsal scales separate the two lateral bands. Sometimes a light longitudinal band edged with black runs along the median line of the back and of the tail. Belly greenish blue.

Four specimens were collected by Mr. Pratt at Ichang, of which the largest is $6\frac{1}{2}$ inches long, the trunk and head measuring $2\frac{3}{4}$ inches.

8. *Japalura yunnanensis* (Anders.). Ichang.
9. *Gecko japonicus* (D. and B.). Mountains north of Kiu-kiang.
10. *Calamaria quadrimaculata* (D. & B.). Mountains north of Kiu-kiang.
11. *Simotes chinensis*, sp. n.

Scales in seventeen rows. Eight upper labials, the fourth and fifth entering the orbit; loreal square; one præ- and two postoculars; anterior chin-shields in contact with four lower labials. Ventral shields 190, distinctly keeled on the sides; subcaudals 63, anal entire. The ground-colour

is a light brownish grey; trunk crossed by thirteen, tail by four narrow, equidistant, black cross-bars; these are somewhat broader on the back than on the sides, and indistinctly edged with white. A black band from eye to eye and continued over the fifth and sixth labials. The black, arrow-shaped spot on the neck is well-defined. Abdomen with numerous square black spots, each occupying one-half or the whole of a ventral scute. Subcaudals uniform white.

One young specimen measures $8\frac{1}{2}$ inches, the tail being 2 inches long.

12. *Achalinus rufescens* (Blgr.). One specimen, uniformly black, from Ichang.

13. *Ablabes chinensis*, sp. n.

This species belongs to that group of the genus of which *Ablabes melanocephalus* is the type; it comes nearest to *Ablabes humberti*, having, like that species, ten upper labial shields, the eighth of which is excluded from the labial margin. But it differs by having a longer tail and by its less ornamented coloration.

Scales in seventeen rows. One præocular, two postoculars. The occipital does not touch the lower postocular; temporals 1 + 2, the anterior in contact with both postoculars. Ventrals 182; of the tail nearly one-half has been lost, the mutilated part being protected by fifty-three pairs of subcaudals, so that the whole number may be estimated to have been between eighty and ninety. Upper parts nearly uniform brownish grey, the posterior part of the trunk indistinctly showing a series of whitish spots along each side of the back. No black dots along the vertebral line. The black cross bands between the eyes and on the neck are present as in *Ablabes humberti* and *Ablabes collaris*, but much less distinct. Abdomen white, each ventral shield with a black dot on each side.

One specimen was found by Mr. Pratt at Ichang; its trunk measures fifteen inches, and its tail was probably $5\frac{1}{2}$ inches in length.

14. *Coluber rufo-dorsatus* (Cant.). Common in the vicinity of Kiu-kiang.

15. *Elaphis dione* (Pall.). Vicinity of Kiu-kiang.

16. *Elaphis sauromates* (Pall.). Common near Kiu-kiang. Mr. Boulenger has discovered that *Phyllophis carinata* (Gthr.) is the young of this species.

17. *Zaocys dhumnades* (Cant.). Common near Kiu-kiang.

18. *Ptyas korros* (Reinw.). One specimen from Kiu-kiang.



A

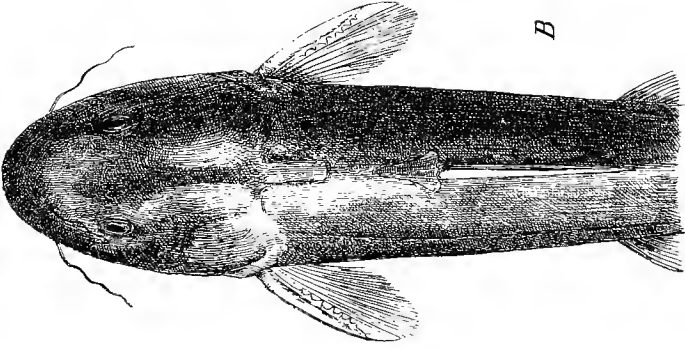
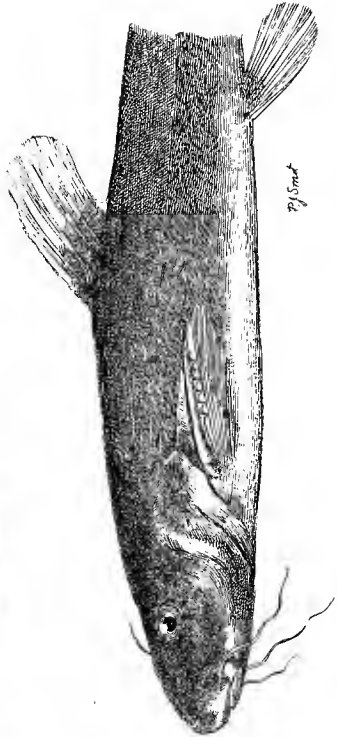


PLATE I.

19. *Cyclophis major* (Gthr.). Common near Kiu-kiang.
20. *Tropidonotus annularis* (Hallow.). Common near Kiu-kiang.
21. *Tropidonotus tigrinus* (Boie). Very common near Kiu-kiang.
22. *Tropidonotus swinhonis* (Gthr.). Ichang.
23. *Tropidonotus macrophthalmus* (Gthr.). Kia-tiang-fu in Sze Chuen (alt. 1,070 ft.).
24. *Ophites septentrionalis* (Gthr.). One specimen from the neighbourhood of Kiu-kiang.
25. *Lycodon rufozonatus* (Cant.). Common at Kiu-kiang and at Kia-tiang-fu, Sze Chuen.
26. *Bungarus semifasciatus* (Kuhl). One specimen from the country near Kiu-kiang.
27. *Callophis annularis* (Gthr.). One specimen from the country near Kiu-kiang.
28. *Trimeresurus axanthomelas*, sp. n. (Plate I. Fig. A.)

The second upper labial shield forms the front part of the facial pit; upper part of the snout with three small shields in front. Supraciliary scute large, not divided. Scales in twenty-one rows, keeled. Ventrals 185, 189; subcaudals 59, 68: anal and præanal not divided. Black, each scale with an elongate greenish-yellow spot, the spot frequently including small black specks. By the modification of the extent of the black colour on the scales a chain of subrhombic spots is formed along the vertebral line; the yellow of the scales within each rhombic spot is of a more reddish shade. Upper part of the head black, with a pattern of narrow symmetrical lines; a deep black band from the eye to the angle of the mouth; labial shields yellow, with a series of black spots on the sutures. A rather indistinct row of black spots along the sides of the body. Lower parts yellow, marbled with black, the black colour predominating in the posterior half of the length.

Five specimens of this beautiful snake were obtained at Ichang by Mr. Pratt, one of the largest being thirty-one inches long, the tail measuring five inches. Mr. Boulenger considers it to be identical with *T. jerdonii* (Gthr.) from the Khassya Hills, but by its striking coloration it forms at any rate a well-marked variety. It feeds on mice; and the specimen I extracted from its stomach proved to be an undescribed species.

29. *Trimeresurus monticola* (Gthr.). Kia-tiang-fu in the province of Sze Chuen (alt. 1,070 ft.).

30. *Halys blomhoffii* (Boie). Common near Kiu-kiang.

31. *Halys acutus*, sp. n.

This new species may be at once recognised by the upper part of the extremity of the snout being produced into a short, flexible, pointed lobe which projects from between the anterior frontal and the rostral shield. The anterior frontals are small, longer than broad; the posterior very large, intermediate in size between the anterior frontals and the occipitals. Eye surrounded by a ring of small orbitals, of which those in front are rather elongate; that below the eye is likewise long and crescent-shaped, separated by a small postocular from the superciliary shield. Seven upper labials, of which the second forms the anterior wall of the antorbital pit, the third and fourth being the largest. A series of three large temporal shields occupies the lower part of the temple, the space between this series and the occipital being covered by ordinary scales.

Scales strongly keeled, the keels forming a high sharp ridge on the posterior part of the body. Each scale bears, besides the keel, on its extremity a pair of very small nodules; scales in twenty-one rows. Ventral shields 160; anal entire; subcaudals 60, of which the six or twenty anterior may be single. Extremity of the tail compressed, covered with comparatively large vertical scutes, and terminating in a long and compressed spine.

The colour of the upper parts is brown, each side of the body being ornamented with a series of large dark-coloured triangles, the point of each triangle meeting that of the other side in the median line of the back. Lower parts whitish with a series of large rounded black spots on each side and smaller ones of irregular shape in the middle. The upper part of the head is uniform black; a sharp line, which runs from the eye along the middle of the temporal scutes to the angle of the mouth, divides the black coloration of the upper parts from the white of the lower.

This species is very remarkable, not only on account of the rostral lobe, but also for the modification of the scutellation of its compressed tail. Although this modification cannot in any way be taken as an initial step in the development of the rattle of *Crotalus*, the rattle being a modification of the last dermal scute only into which the vertebral column is not prolonged, yet the tail of this species may exercise in a much smaller degree the same function as in the rattlesnake, and may be an instrument by which vibrations and sound are produced. It is well known also that many innocuous snakes are able to vibrate the extremity of their tail. To judge from its size and from the development of its poisonous apparatus this snake must be extremely dangerous.

Three specimens are in the collection, of which the largest is forty-six inches long, the tail measuring $6\frac{1}{2}$ inches. It has been figured in *Ann. Mag. Nat. Hist.* 1888, I. pl. 12.

BATRACHIANS

1. *Rana boulengeri*, sp. n.

This species belongs to that division of the genus of which *Rana kuhlii* and *Rana liebighii* are characteristic forms.

Vomerine teeth in two short oblique series, each starting from the inner edge of the choana. Head large, broad, much depressed; snout very short and rounded; canthus rostralis short but distinct; upper eyelid a little broader than the interorbital space; tympanum hidden. First finger longer than the second; toes with swollen extremity, entirely webbed; subarticular tubercles well developed; inner metatarsal tubercle elongate; no outer tubercle. The tibio-tarsal joint does not reach the end of the snout when the limb is carried forward. Skin of the upper parts covered with large elongate warts and small rounded tubercles; a strong fold of the skin above the tympanum; no glandular fold on the side of the back. Uniform blackish brown above. Male with two internal vocal sacs.

As in *Rana liebighii*, the breeding male has extremely thick forearms, but without any special armature. The rudimentary thumb and the large rounded tubercle on the upper side of the first finger are thickly studded with horny spines, the second and third fingers having similar spines, but less numerous. The whole of the chest is covered with smaller and larger rounded tubercles, each armed with a black conical horny spine, and similar but smaller dermal structures are scattered over the abdomen and also over the throat.

Two specimens of this large species were sent by Mr. Pratt from Ichang. The length from the snout to the vent is four inches.

2. *Bufo vulgaris*. At Ichang and at Kia-tiang-fu (alt. 1,070 ft.).3. *Megalobatrachus maximus*. One specimen from Kia-tiang-fu (alt. 1,070 ft.).4. *Hynobius chinensis*, sp. n.

Allied to the Japanese *Hynobius nebulosus*, but with the series of vomerine teeth much shorter, extending backwards only to the middle of the eye-ball. General habit short and stout; head large, nearly as broad as long, its length being rather more than one-fourth of the length of the trunk. Tail compressed in its whole length, but without crest; body with eleven lateral folds. The limbs meet when adpressed; fifth toe well developed; no carpal or tarsal tubercles. Skin smooth; gular fold indistinct. Nearly uniform horny black, the lower parts brownish, finely marbled with darker.

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|--------------------------------|-----------|
| Total length | 85 millim |
| From snout to cloaca | 46 " |
| Length of head | 11 " |
| Width of head | 10 " |
| Fore limb | 15 " |
| Hind limb | 16 " |
| Tail | 39 " |

Two specimens were collected by Mr. Pratt at Ichang.

FISHES

1. *Acipenser dabryanus* (Dum.). Ichang.
2. *Acipenser*, sp. inc., young specimens from Kiu-kiang.
3. *Psephurus gladius* (Martens). Kiu-kiang.
4. *Eleotris xanathi*, sp. n. D. $6\frac{1}{5}$. A. $1\frac{1}{7}$. L. lat. 33.

Præoperculum without spine. Twelve series of scales between the origin of the second dorsal fin and the anal. The scales on the neck, cheek, and opercles are small and do not extend on to the interorbital space. Scales finely ciliated. The height of the body is one-fourth of the total length (without caudal); the length of the head two-sevenths. Eye rather small, shorter than the snout, one-fifth of the length of the head, and exceeding the width of the interorbital space. Head rather compressed and high behind, with broad snout, and the lower jaw prominent. The maxillary extends to the vertical from the front margin of the orbit. Gill-membranes attached to the median line of the isthmus. Vertical fins lower than the body; caudal fin rounded, equal in length to the pectorals, which are three-fifths of the length of the head. Light-coloured, with broad, indistinct, darker cross bands on the sides. Dorsal and caudal fins indistinctly spotted with brown; no spot at the base of the pectoral fin.

This species, of which there is only one specimen in the collection, $2\frac{1}{2}$ inches long, is allied to *Eleotris potamophila*, but readily distinguished from it by its narrow, scaleless, interorbital space. I do not know of any other species of this genus ascending in fresh water to a similar distance from the sea.

5. *Phiocephalus argus* (Cant.). Kiu-kiang.
6. *Polyacanthus opercularis* (L.). Kiu-kiang.
7. *Mastacembelus chinensis* (Blkr.). Ichang.
8. *Silurus asotus* (L.). Kiu-kiang and Kia-tiang-fu.

9. *Macrones longirostris* (Gthr.). Kiu-kiang.
10. *Macrones macropterus* (Blkr.). Kia-tiang-fu and Kiu-kiang.
11. *Macrones crassilabris* (Gthr.). Kiu-kiang and Kia-tiang-fu.
12. *Macrones tæviatus* (Gthr.). Kiu-kiang.
13. *Macrones vachellii* (Rich.). Kiu-kiang.
14. *Macrones pratti*, sp. n. D. 1/6. A. 19. (Plate I. Fig. B.)

Head smooth above, covered with a thin skin; also the bones on the nape are covered with skin. Occipital process narrow, about four times as long as broad; basal bone of the dorsal spine elongate, triangular, nearly as long as the occipital process, from which it is separated by an interspace. Body much elongate, its depth being one-ninth of the total length without caudal, the length of the head nearly one-fifth. Snout broad, obtusely rounded, twice and a half as long as the eye, which is one-seventh of the length of the head. Mouth inferior, as wide as the snout. Teeth on the palate in an uninterrupted concentric band, which is narrower than that of the inter-maxillaries. Barbels very thin, the nasal filaments extending not beyond, and those of the maxillaries somewhat behind, the orbit. Dorsal spine not serrated, lower than the body; pectoral spine a little longer, stronger, strongly denticulated interiorly. Adipose fin about as long as anal. Caudal notched. Coloration nearly uniform.

One specimen $8\frac{1}{4}$ inches long. Kia-tiang-fu, 1,070 feet, province Sze Chuen.

M. Sauvage describes in *Ann. Sc. Nat.* 1874, i. p. 7, a *Liocassis torosilabris* which I thought might be our species, but the latter has neither movable labial teeth nor a denticulated dorsal spine longer than the pectoral.

15. *Glyptosternum conirostrum* (Steind.). Mountain streams running into the Min River, Sze Chuen.
16. *Exostoma davidi* = *Chimarrhichthys davidi* (Sauvage). From the same locality.
17. *Amblyceps marginatus*, sp. n. D. 1/6. A. 15. P. 1/7. V. 6. (Plate II. Fig. A.)

Head very broad and depressed, but little longer than wide; its length is one-fourth of the total (without caudal); the greatest depth of the body is nearly one-sixth of the same length. Eyes very small, almost immediately behind the upper lip. Barbels well developed, the maxillary and the outer one of the mandible are the longest, reaching to the middle of the pectoral fin, the nasal and the inner one of the mandible only half as long. Mouth wide, anterior, with the lower jaw a little longer than the

upper. The maxillary band of teeth is about three times as wide as long. Fins enveloped at the base in thick skin. Dorsal fin with the first ray osseous, its origin being midway between the end of the snout and the adipose fin. Adipose fin low and long, about as long as the anal fin. Pectoral fin, with the first ray long and serrated, extending backwards to below the middle of the dorsal. Ventral fins at some distance behind the dorsal, short, not extending to the anal. Caudal subtruncated.

Brownish-black with broad pure white margins to all the fins.

Length $4\frac{1}{2}$ inches. From mountain streams running into the Min River, province Sze Chuen.

18. *Carassius auratus* (L.). Kiu-kiang.

19. *Pseudogobio sinensis* (Kner). Kiu-kiang.

20. *Pseudogobio productus* (Ptrs.). Kiu-kiang.

21. *Pseudogobio maculatus* sp. n. D. 10. A. 8. L. lat. 41.
L. transv. $\frac{4}{5}$.

Barbels none. Body rather compressed, its greatest depth being equal to the length of the head and one-fourth of the total (without caudal); snout rather compressed, of moderate length, a little longer than the eye, the diameter of which is nearly one-fourth of the length of the head. Interorbital space convex, as wide as the orbit. Mouth very small, sub-anterior; lower lip interrupted in the middle. The origin of the dorsal fin is nearer to the end of the snout than to the root of the caudal; ventrals inserted below the middle of the dorsal; caudal fin moderately forked; pectoral not quite so long as the head, extending to the origin of the dorsal fin, but not to the root of the ventral. Silvery, with large, irregular, deep black spots, each occupying one or more scales; anterior part of the dorsal fin and a band along each caudal lobe black.

Two specimens, the larger of which is three inches long, are in the collection.

This species would belong, on account of the absence of barbels, to Bleeker's genus *Sarcocheilichthys*.

22. *Rhinogobio cylindricus*, sp. n. D. 11. A. 8. L. lat. 48.
L. transv. $\frac{6}{7}$.

Body low, subcylindrical, its greatest depth being contained five-and-a-half times in the total length (without caudal), the length of the head four times and a fourth. Head low, with the snout much elongate and pointed, the eye being rather nearer to the gill-opening than to the end of the snout; the projecting part of the snout is swollen, conical, the mouth being entirely at the lower side of the snout. Eye one-fifth of the

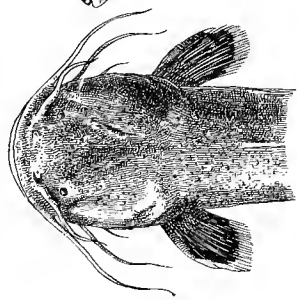
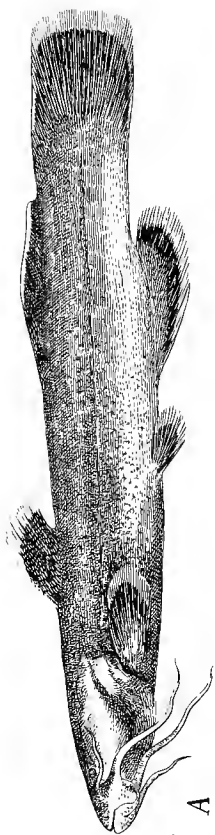


PLATE II.

length of the head, less wide than the flat interorbital space. Upper lip swollen; lower very short, broadly interrupted in the middle; barbel very short, lying in a groove which extends forward to near the extremity of the snout. Gill-membrane attached to the side of the isthmus. The origin of the dorsal fin is considerably nearer to the end of the snout than to the root of the caudal; ventrals inserted below the posterior half of the dorsal. Caudal deeply forked. The pectorals are much shorter than the head, and scarcely extend to the origin of the dorsal fin. The lower parts of the head and of the thoracic region entirely scaleless. Coloration transparent, without any spots.

One specimen, 4 inches long.

This species differs from *Rhinogobio typus* in having a much smaller eye and in having the lower parts of the thorax scaleless.

23. *Barbus sarana* (H. B.) Kia-tiang-fu.

24. *Rhynchocypris variegata*, g. et sp. n. D. 10 or 11. A. 9.
L. lat. 100. (Plate II. Fig. B. Two views of the head are also shown at the bottom of Plate III.)

Body rather elongate, its height being two-ninths of the total length (without caudal), the length of the head two-sevenths. Head depressed, broad and flat above; snout wedge-shaped and produced. Eye of moderate size, two-ninths of the length of the head and two-thirds of the length of the snout or of the width of the interorbital space. Origin of the dorsal fin nearer to the root of the caudal than to the extremity of the snout; the anal fin commences at a short distance behind the dorsal and terminates a long way from the caudal; caudal fin emarginate. All the fins are short rayed; the pectorals are not much longer than half the length of the head and terminate at a considerable distance from the ventrals. The root of the ventrals occupies nearly the middle between the end of the snout and the root of the caudal fin; they nearly reach the vent. Lateral line complete, well developed, running along the middle of the body. Back greyish, sides and lower parts silvery; numerous scales on the sides blackish.

This small species grows to a length of five inches. Several specimens were collected by Mr. Styan in mountain streams near Kiu-kiang, and others at Ichang by Mr. Pratt.

25. *Pseudorasbora parva* (Schleg.). Kiu-kiang.

26. *Xenocypris argentea* (Gthr.) Kiu-kiang.

27. *Ctenopharyngodon idellus* (C. V.). Kiu-kiang.

28. *Rhodeus sinensis* (Gthr.). Kiu-kiang and Kia-tiang-fu.

29. *Ochetobius elongatus* (Kner). Kiu-kiang.

30. *Squaliobarbus curriculus* (Rich.). Kiu-kiang.
 31. *Hypophthalmichthys molitrix* (C. V.) Kiu-kiang.
 32. *Chamodichthys pekinensis* (Basil). Kiu-kiang.
 33. *Culter ilishæformis* (Blkr.). Kiu-kiang.
 34. *Hemiculter leucisculus* (Kner). Kiu-kiang.
 35. *Luciobrama typus* (Blkr). Kiu-kiang.
 36. *Homaloptera fimbriata*, sp. n. D. 11. A. 7. P. 19. V. 11.
 (Plate III. Fig. A.)

This species differs from the typical species of *Homaloptera* in the shape of its snout and in the arrangement of the barbels. The snout is flat and spatulate, considerably narrowed in front and nearly as long as broad; the mouth is surrounded with fringes, from which the barbels differ only by their greater size; the barbels and fringes of the upper jaw arranged in two concentric series, two pairs of barbels standing in the outer series; behind each angle of the mouth there is a third pair of barbels.

Scales minute and smooth, but there are a few larger ones along the median line of the back and along the lateral line. Origin of the anal fin rather nearer to the root of the caudal than to the occiput. Eyes very small, much nearer to the gill-opening than to the end of the snout; ventral fins opposite to the anterior half of the dorsal. Pectoral fins not extending to the ventrals. Body with broad, indistinct, dark cross bands; pectoral, ventral, and caudal fins with greyish spots.

Three specimens, $4\frac{1}{2}$ inches long, from Ichang and the Min River.

37. *Homaloptera abbreviata*, sp. n. D. 11. A. 7. P. 23. V. 14-15.
 L. lat. 75. (Plate III. Fig. B.)

The scales are smooth and very small; those of the lateral line are somewhat larger, and seventy-five perforated scales can be counted in it. Snout rounded and nearly twice as long as the postorbital part of the head. Barbels short and simple; upper lip fringed, but not the lower. The dorsal fin occupies the middle between the snout and caudal fin, its origin being somewhat behind that of the ventrals. Pectorals extending beyond the origin of the ventrals; caudal deeply forked.

Upper parts dark coloured, fins yellowish, lower caudal lobe with a diffuse, blackish longitudinal band.

One specimen four inches long from mountain streams running into the Min River, Province Sze Chuen.

38. *Misgurnus anguillicaudatus* (Cant.). Kiu-kiang.

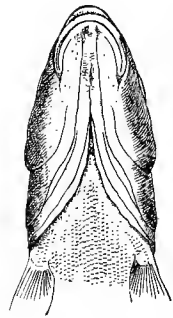
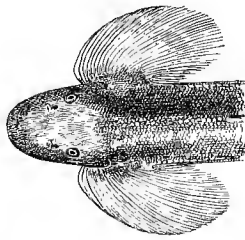
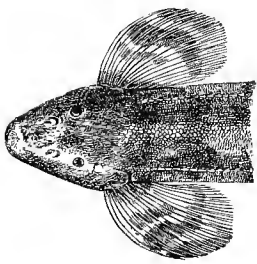
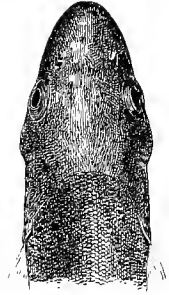
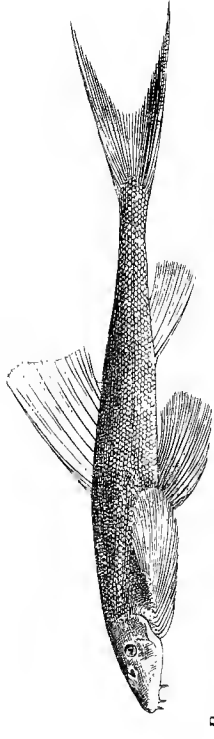
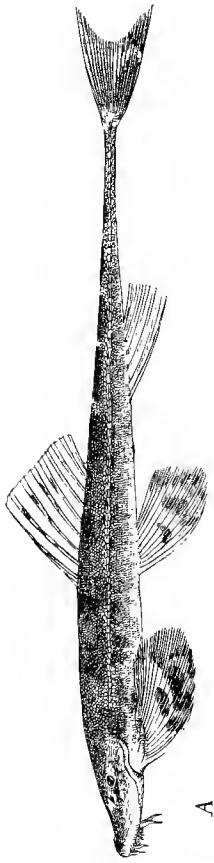


PLATE III.

39. *Misgurnus nizolepis*, sp. n. D. 7 or 8. A. 8, 9. V. 6 or 7.

This species has larger scales than any other of the genus known to me; they are arranged in thirteen longitudinal rows between the dorsal fin and the lateral line, and in ten between the lateral line and the ventral fin. Barbels ten, four belonging to the mandible; the inner pair of the mandibular barbels are about half the length of the outer ones. Head and body compressed. The height of the body is nearly equal to the length of the head, which is contained six-and-a-half times in the total length (without caudal). Snout at least twice as long as the diameter of the eye, which is one-sixth of the length of the head. Origin of the dorsal fin nearer to the root of the caudal than to the occiput, conspicuously in advance of the root of the ventral fin. Pectoral fin a little shorter than the head; caudal fin rounded, continued by a series of rudimentary rays to the anal fin, and a similar distance forward on the dorsal edge of the tail; the rudimentary rays under the free portion of the tail are particularly deep. Greyish green, with a greyish line along each series of scales; lower parts whitish, finely mottled with brown.

Three specimens, of which the largest is $6\frac{1}{2}$ inches long, from Kiu-kiang.

40. *Nemachilus xanthi*, sp. n. D. 12. A. 7. V. 8.

Scales minute but conspicuous. Caudal fin deeply emarginate; the origin of the dorsal fin is midway between the end of the snout and the root of the caudal. The height of the body is considerably less than the length of the head which is one-fourth of the total (without caudal). Snout of moderate length, pointed, as long as the postorbital portion of the head; eye of moderate size. A skinny adipose lobe occupies the place of the enlarged axillary scales of the pectoral and ventral fins. Back crossed by fourteen narrow brownish bands; a small black spot at the end of the lateral line; each caudal lobe with four oblique blackish bands each dorsal ray with one or two blackish specks.

One specimen, $4\frac{1}{2}$ inches long, from Ichang.

41. *Nemachilus stoliczkae* (Day). Kia-tiang-fu.42. *Botia variegata*, sp. n. D. 11. A. 8. V. 9.

Barbels six. The height of the body is one-fifth of the total length (without caudal), the length of the head two-sevenths; snout elongate, but the small eye is much nearer to the end of the snout than to that of the operculum. The suborbital spine extends to below the hind margin of the orbit. Interorbital space narrow, transversely convex, twice as wide as the orbit. Origin of the dorsal fin midway between the root of the caudal and the orbit. Caudal fin deeply forked. Body covered with minute but regularly arranged scales. Ground colour yellowish, the body

ornamented with five black bands, which are irregular in shape, and may be broken up into large blotches; all are continuous across the back, and the middle one corresponds in position to the dorsal fin. All the fins variegated with black, the black markings of the dorsal and anal fins sometimes confluent into broad band-like spots.

Two specimens of this fine gigantic species of loach were sent by Mr. Pratt from Ichang. The larger measures thirteen inches in length.

43. *Botia pratti*, sp. n. D. 11. A. 8. V. 9. (Plate IV. Fig. A.)

Barbels eight, but the two symphyseal barbels are not prolonged into filaments—more like a pair of soft round buttons. The height of the body is rather more than one-fifth of the total length (without caudal), the length of the head two-sevenths; snout elongate, but the very small eye is rather nearer to the end of the snout than to that of the operculum. The suborbital spine extends to below the hind margin of the orbit. Interorbital space narrow, transversely convex, three or four times as wide as the very small eye. Origin of the dorsal fin midway between the root of the caudal and the orbit. Caudal fin deeply forked, the lobes being as long as the head; body covered with minute but imbricate scales. Ground colour brownish olive, without distinct markings on the body. Dorsal fin with two blackish bands running parallel to the upper margin. Caudal rays with numerous linear black markings or without any spots; the lower fins with very indistinct blackish markings.

Three specimens eight inches long, from Kia-tiang-fu, 1,070 feet (foot of Omie-shan), Province Sze Chuen.

44. *Botia superciliaris*, sp. n. D. 11. A. 8. V. 8. (Plate IV. Fig. B.)

Barbels eight, but the two symphyseal barbels are not prolonged into filaments—more like a pair of soft round buttons. The height of the body is two-ninths of the total length (without caudal), the length of the head two-sevenths; snout elongate, the small eye being rather nearer to the end of the operculum than to that of the snout. The suborbital spine lies in a long cleft which extends beyond the eye in both directions. Interorbital space narrow, transversely convex, two-and-a-half times as wide as the eye. Origin of the dorsal fin midway between the root of the caudal and the eye. Caudal fin forked, the lobes being shorter than the head. Body covered with minute scales which are imbricate on the tail. Ground colour light olive with broad brownish bars across the back, five in front and five behind the dorsal fin. A yellowish streak on the side of the snout running backwards through the superciliary region; three yellowish longitudinal lines on the crown of the head. Dorsal and generally pectoral fin with a broad dark cross band well within the margin. Each caudal lobe with three or four dark oblique bands.

Five specimens six inches long, Kia-tiang-fu, 1,070 feet (foot of Omie-shan), Province Sze Chuen.

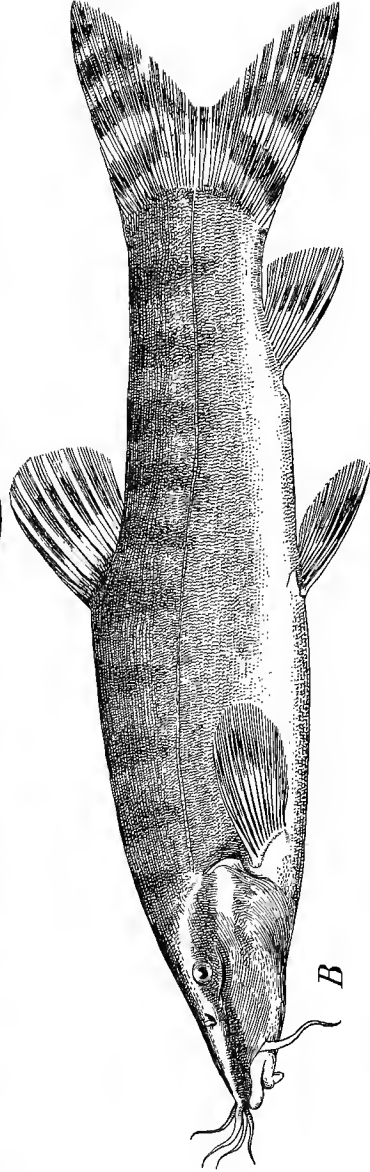
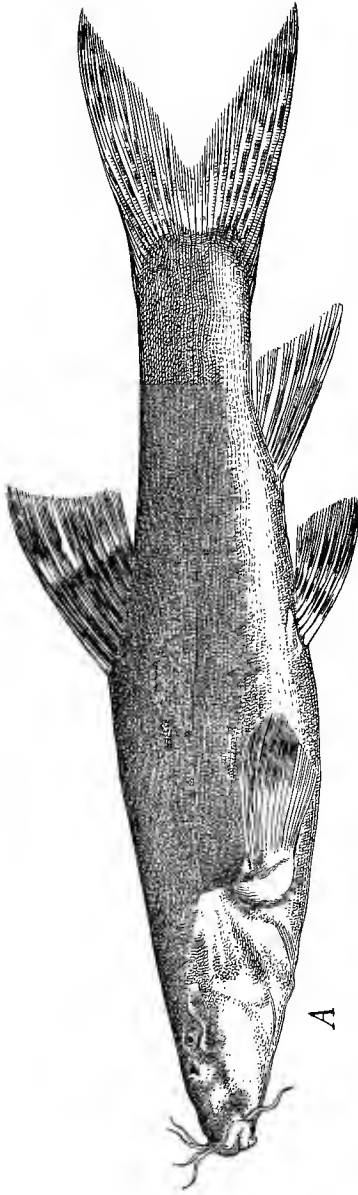


PLATE IV.